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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,342	01/25/2005	Akihiro Tachibana	US01-04066PCT	6310

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EXAMINER

LAMB, CHRISTOPHER RAY

ART UNIT PAPER NUMBER

2627

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/522,342

Applicant(s)

TACHIBANA ET AL.

Examiner

Christopher R. Lamb

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 June 0206.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) 2-7, 12-17, 22-27, 32-37 and 41-53 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 8-11, 18-21, 28-31 and 37-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                    |                                                                             |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____                                                |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/9/2006</u> .                                                            | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group II in the reply filed on June 15<sup>th</sup>, 2006 is acknowledged.

### ***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Specification***

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1, 11, 21, and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Horimai (US 2004/0062178 A1).

Regarding claim 1:

Horimai discloses a holographic recording apparatus (Fig. 2) for recording data on a holographic recording medium in the form of a flat plate (Fig. 1) which includes a recording layer comprising a photosensitive material (paragraph 81) and for which recording is achieved by an interference pattern of a coherent light beam (paragraph 69),

the apparatus comprising:

a pickup including an objective lens which focuses the coherent light beam (paragraph 83), for moving the objective lens along a recording track of the holographic recording medium (paragraph 74) and detecting reflected light from the recording track to perform focus- and tracking-servo control (paragraph 71);

a relative velocity determination unit for determining a relative velocity of a converging position of the objective lens with respect to the holographic recording medium (paragraph 156);

a driving unit for changing a relative position of the objective lens with respect to an optical path of the coherent light beam in such a manner that the relative velocity falls within a predetermined range at least during a predetermined period (paragraph 74); and

a control unit for performing recording for the recording layer during the predetermined period (paragraph 72, 158).

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Regarding claim 11:

The holographic recording apparatus of Horimai is also a reproducing apparatus (paragraph 70).

Regarding claims 21 and 31:

These are method claims corresponding to the earlier apparatus claims and are met when the apparatus operates.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 8-10, 18-20, 28-30, and 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horimai (US 2004/0062178 A1) in view of Fuji (US 5,465,248).

For these claims the following combination is used:

Horimai discloses a holographic recording apparatus as discussed above in the rejection of claim 1. Horimai discloses that the recording light needs to follow the recording spot for a sufficient period of time (paragraphs 6-7, 14) and discloses a driving unit for achieving that (paragraph 74).

Fuji discloses means to follow a recording medium with recording light (column 3, lines 10-16). Fuji discloses rotating a polygon mirror arranged in an optical path of the

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coherent light beam to move the incident optical path of the coherent light beam to the object lens (column 6, lines 30-65).

It would have been obvious to one of ordinary skill in the art at the time of the invention to include in Horimai wherein the driving unit rotates a polygon mirror arranged in an optical path of the coherent light beam to move the incident optical path of the coherent light beams to the objective lens, as taught by Fuji.

The motivation would have been to improve the stability of the recording (Fuji discloses in columns 1-4 various systems for maintaining tracking and discloses that this method achieves the best results).

Regarding claim 8:

In Horimai in view of Fuji the driving unit moves an incident optical path of the coherent light beam to the objective lens to make the relative velocity fall within a predetermined range at least during a predetermined period (Horimai alone made sure the relative velocity fell within the predetermined range – paragraph 156 – and in Horimai in view of Fuji the rotating polygon mirror moves the optical path to achieve it).

Regarding claim 9:

In Horimai in view of Fuji the driving unit rotates a mirror arranged in an optical path of the coherent light beam to move the incident optical path of the coherent light beam to the objective lens (the polygon mirror, as discussed above).

Regarding claim 10:

The driving unit rotates a polygon mirror arranged in an optical path of the coherent light beam to move the incident optical path of the coherent light beam to the objective lens (discussed above).

Regarding claims 18-20:

The reproduction apparatus of Horimai in view of Fuji is also a reproducing apparatus (Horimai paragraph 70).

Regarding claims 28-30 and 38-40:

These are method claims corresponding to the earlier apparatus claims and are met when the apparatus operates.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ogura et al. (US 5,028,102) uses a rotating polygon mirror to perform holographic recording.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher R. Lamb whose telephone number is (572) 272-5264. The examiner can normally be reached on 8:30 AM to 6:00 PM Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CRL 6/26/06

  
THANG V. TRAN  
PRIMARY EXAMINER